Status of D0 Operations

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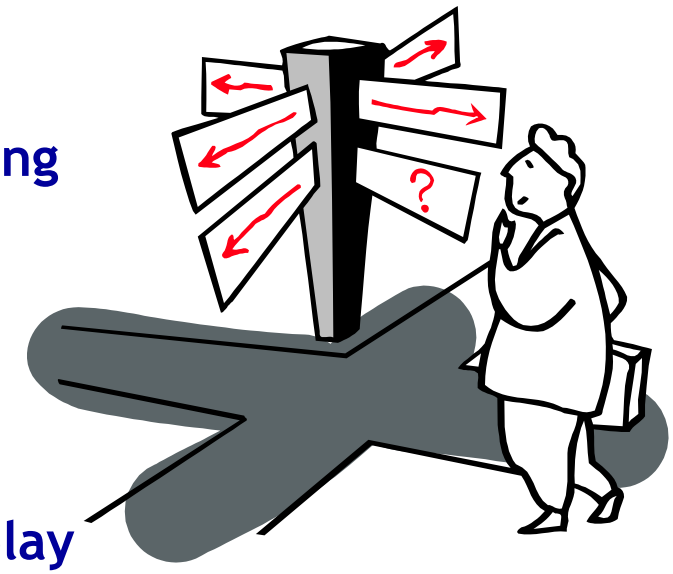
Run IIa Operations Page

http://www-d0.fnal.gov/runcoor/

- Daily Run Plan
- Data Taking Status (w/Plots)
- Detector & Trigger Status
- Luminosity Reports
- Shift Schedules & Statistics
- Current Events
- Physics Runs
- Global Monitoring
- Trigger Rates
- Run II Bests
- Run II Stores
- Alarm Reports
- Live Event Display



- Photographs
- Shifter Tutorials
- Mailing Lists
- Data Quality
- Data Access
- Databases
- Reco & Farm Status
- Safety Information
- All Experimenters Mtg
- Tevatron Operations
- Beams Status
- MCR E-Log
- CDF Operations

Tevatron Status

- Tevatron lost 16 days in Feb & March due to two magnet failures
  - Previous time between magnet losses was 15 months
- During the Jan 2003 shutdown, the Lambertson magnet at C0 was removed
  - Used for the abort during Fixed Target running
  - Now possible to inject and store more protons without passing the stability limit
- Record initial luminosities of >4E31 have been reached
  - For a given size of the antiproton stack, the recent stores are 20% higher.
  - The present trend would allow a 4.5e31 store with around 170 mA in the antiproton stack.
  - Antiproton stacking rate becomes very low for larger stacks
  - Further increases will come from improvements in emittance & transfer rates.
- Dogleg in Booster is causing losses and is under study
  - Each of the two Booster extraction septa has a set of vertical dogleg magnets to steer the beam around it during acceleration
  - These magnets have an edge focusing effect which distorts the horizontal injection lattice
- Wooden power pole was discovered May 20 with severe rot
  - Suspended all Accelerator operations from May 27-June 1
  - Tevatron operations have not fully recovered yet with all stores < 3E31
    - Not well understood - Higher antiproton losses, shorter lifetime…

D0 Initial Luminosities

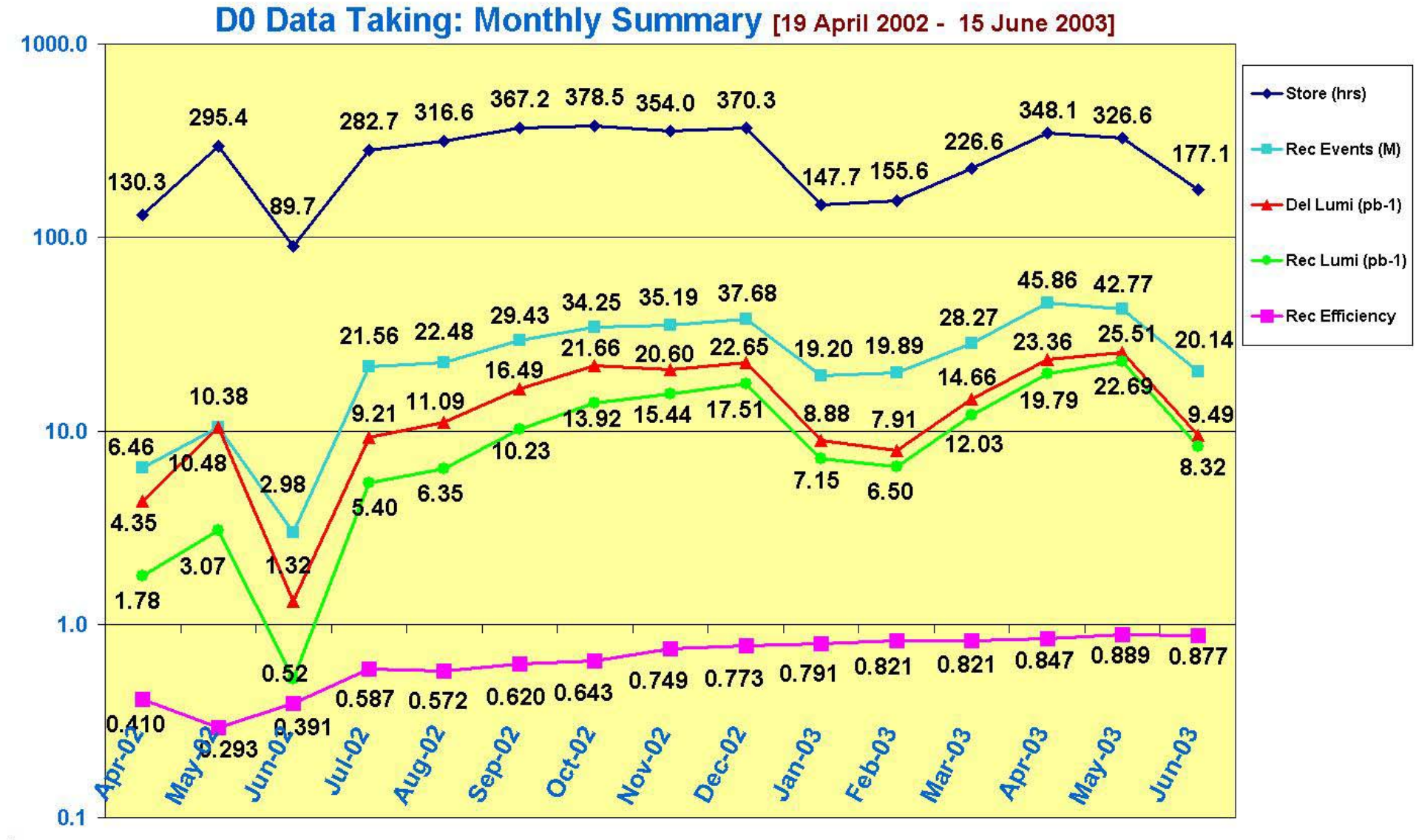
- DØ Record Initial Luminosities
  - 06 Jul 2002 - Store 1499 - 1.99E31
  - 25 Jul 2002 - Store 1580 - 2.08E31
  - 26 Jul 2002 - Store 1583 - 2.48E31
  - 21 Sep 2002 - Store 1775 - 2.70E31
  - 24 Sep 2002 - Store 1787 - 2.83E31
  - 07 Oct 2002 - Store 1832 - 2.90E31
  - 08 Oct 2002 - Store 1834 - 3.23E31
  - 09 Oct 2002 - Store 1836 - 3.45E31
  - 08 Nov 2002 - Store 1953 - 3.54E31
  - 16 Mar 2003 - Store 2318 - 3.91E31
  - 20 Mar 2003 - Store 2328 - 3.95E31
  - 02 May 2003 - Store 2502 - 4.03E31
  - 12 May 2003 - Store 2538 - 4.25E31

Initial Lumi (E31)	Store	Start Time	End Time
4.25	2538	2003 May 12 02:06	2003 May 12 20:05
4.23	2555	2003 May 17 14:57	2003 May 18 07:58
4.21	2549	2003 May 15 14:06	2003 May 16 08:04
4.09	2540	2003 May 13 00:56	2003 May 13 19:30
4.07	2551	2003 May 16 13:46	2003 May 17 07:59
4.03	2502	2003 May 02 00:04	2003 May 02 18:13
3.98	2523	2003 May 08 13:26	2003 May 08 23:29
3.97	2529	2003 May 09 09:09	2003 May 09 22:30
3.95	2511	2003 May 06 10:26	2003 May 06 15:25
3.95	2328	2003 Mar 20 08:47	2003 Mar 21 04:10
3.91	2318	2003 Mar 16 08:10	2003 Mar 16 09:18
3.90	2505	2003 May 03 22:44	2003 May 04 14:26
3.87	2546	2003 May 14 16:42	2003 May 15 02:30
3.77	2503	2003 May 03 00:30	2003 May 03 14:23
3.76	2521	2003 May 07 15:55	2003 May 08 09:10
3.67	2447	2003 Apr 21 14:07	2003 Apr 22 08:00
3.63	2509	2003 May 05 13:20	2003 May 06 05:44
3.62	2323	2003 Mar 18 05:03	2003 Mar 18 16:42
3.61	2426	2003 Apr 14 11:55	2003 Apr 14 13:48
3.60	2507	2003 May 04 17:46	2003 May 05 10:46
3.54	1953	2002 Nov 08 22:15	2002 Nov 09 20:32

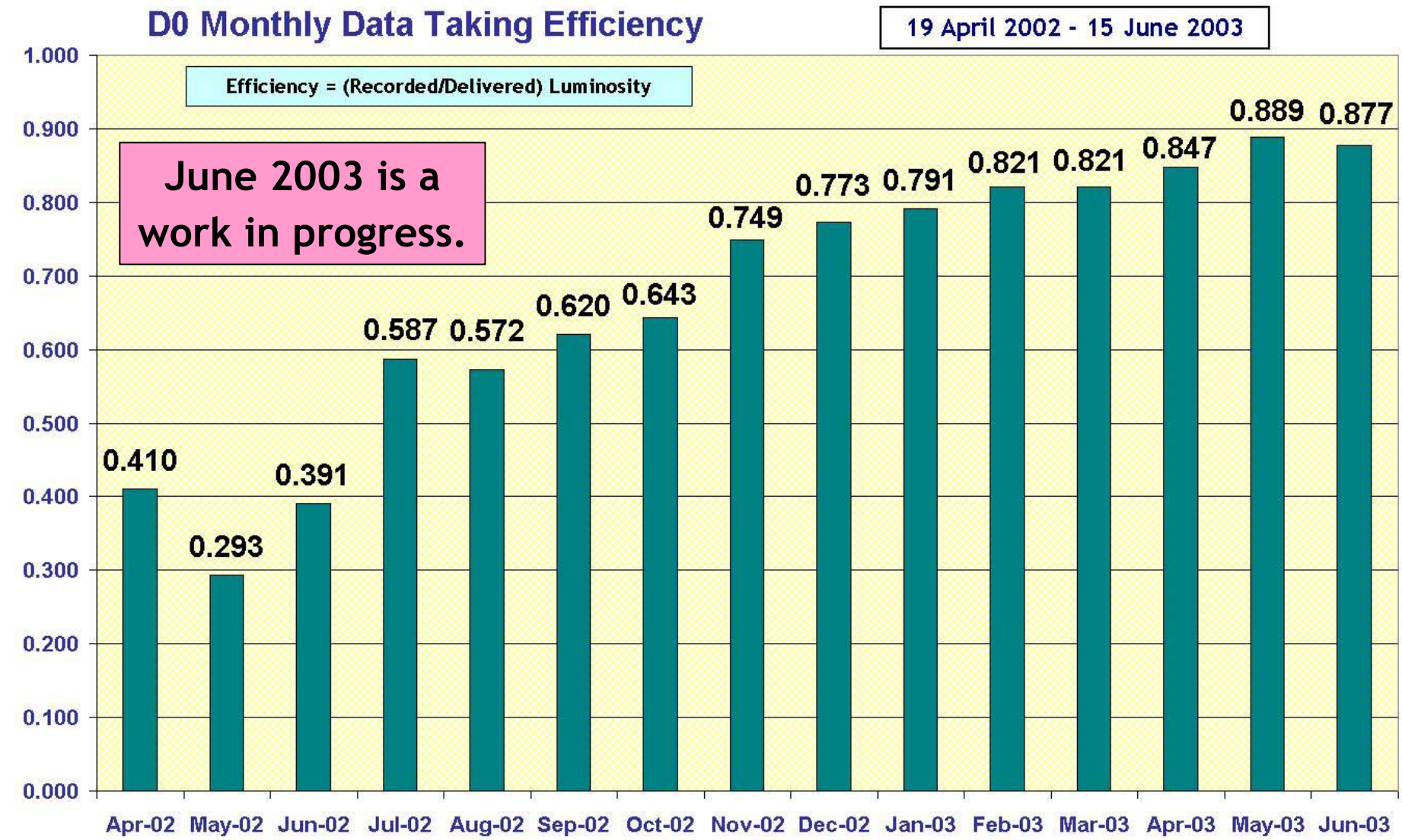
All stores with initial luminosity of 3.6E31 or more were delivered since the last Collaboration Mtg in Feb 2003.

15 of the top 21 were in May 2003

Data Taking Monthly Summary

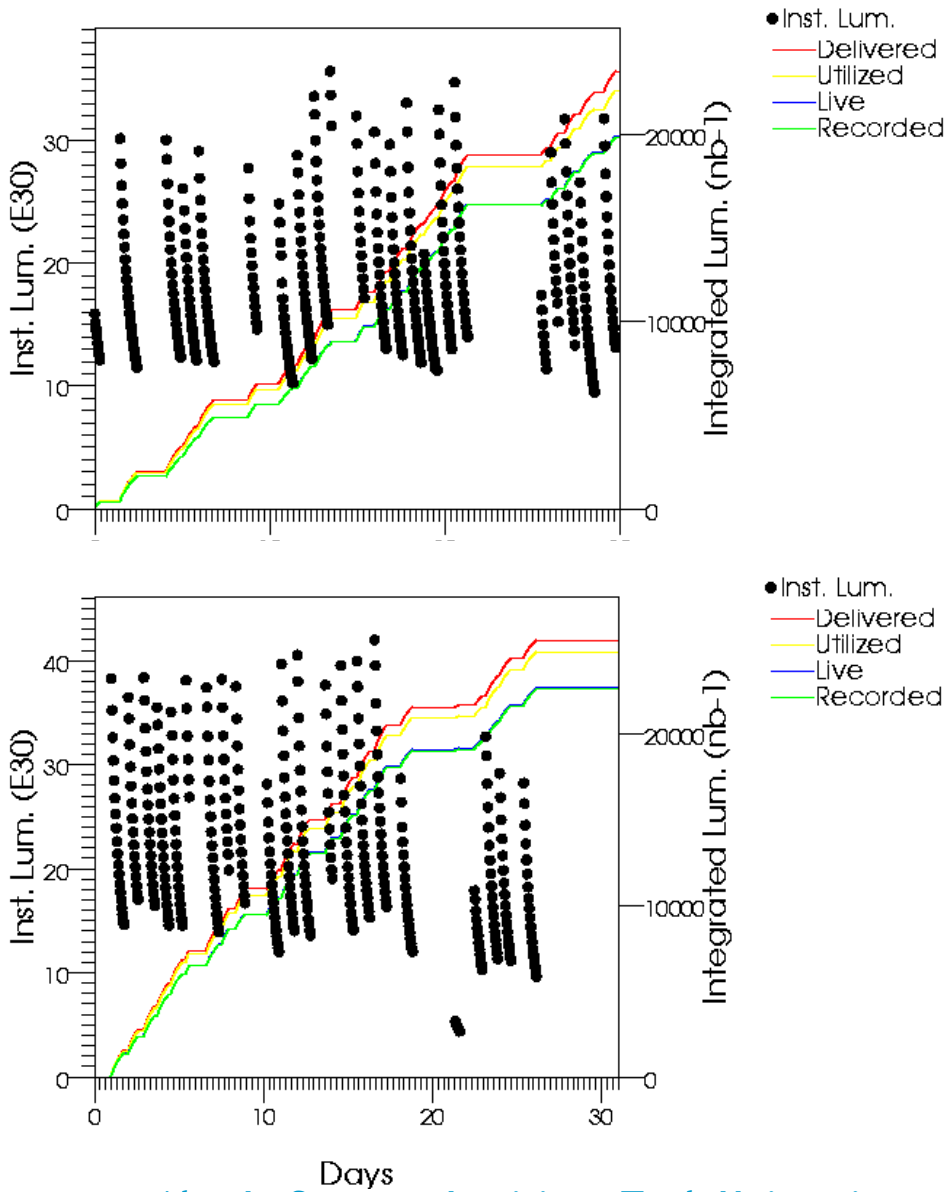


Data Taking Monthly Efficiency

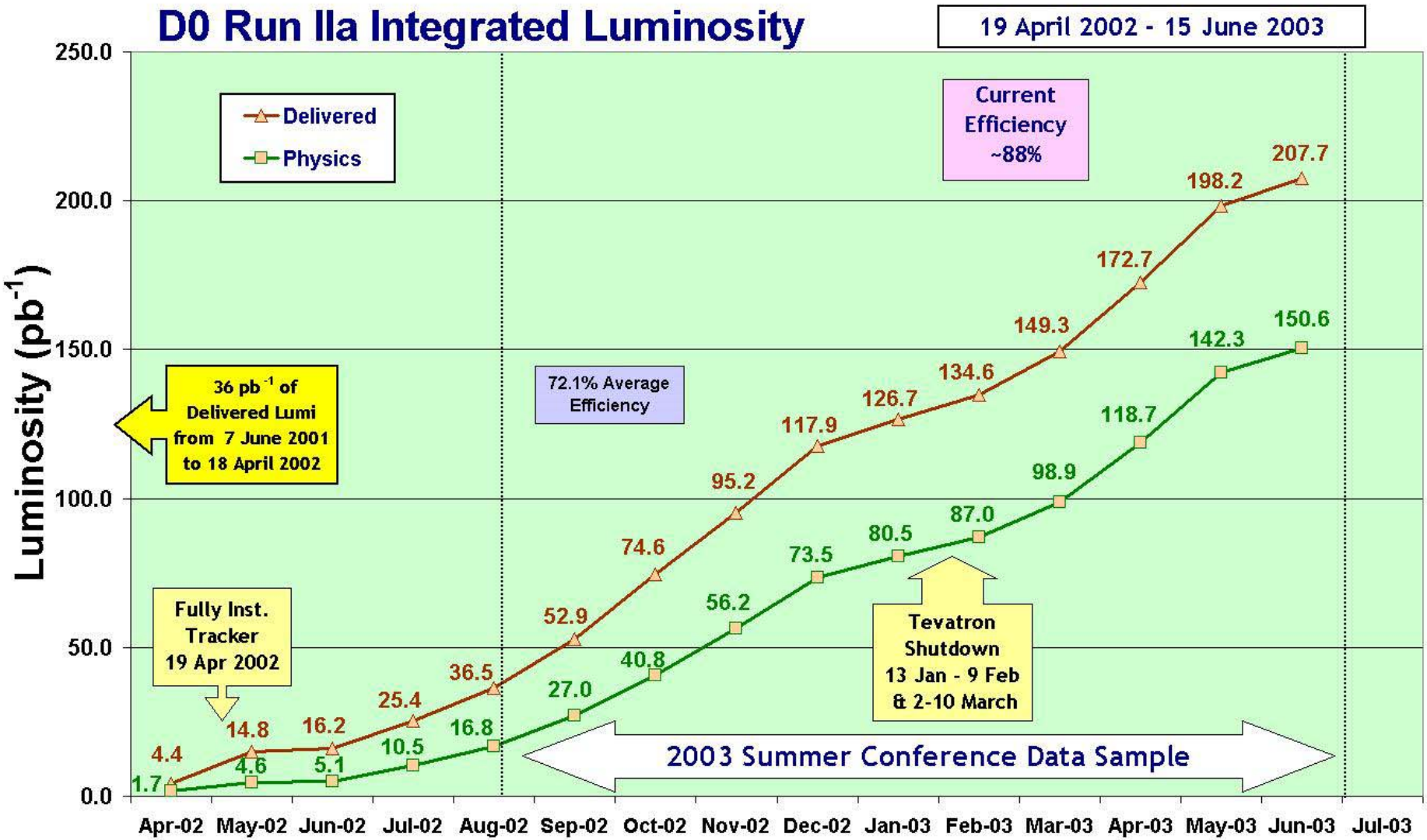


D0 Luminosity Reports

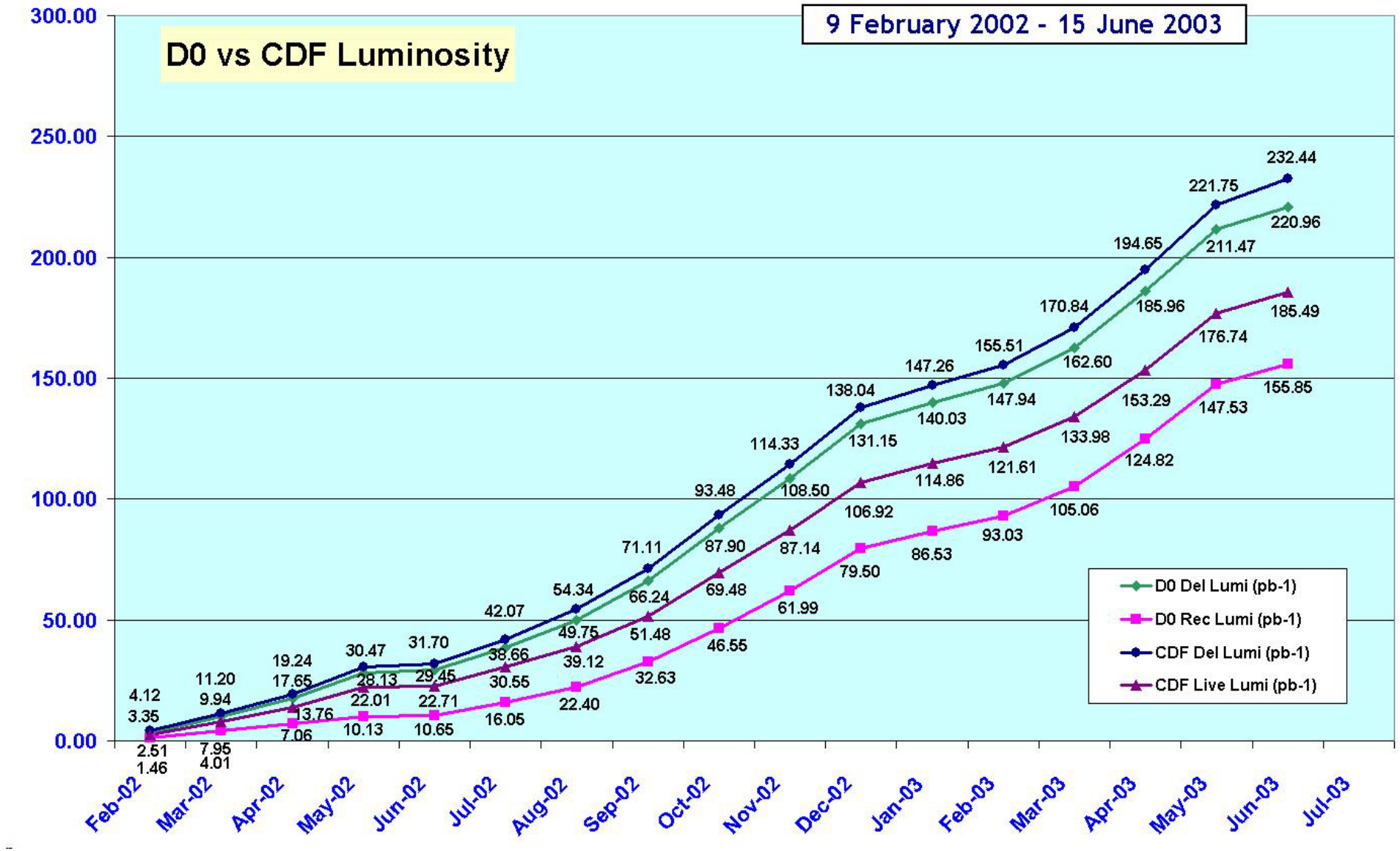
Year	Month	Store Time (hours)	Integrated Luminosity (pb^{-1})			Events (millions)
			Delivered	Recorded	Processed	
2000	October		0.04			
	November		0.04			
	Total		**0.08**			
2001	April					
	May					
	June	208.5	0.05			
	July	125.6	0.76			
	August	356.1	4.35	0.10	0.08	1.7
	September	375.6	4.77	0.50	0.50	5.8
	October	61.8	1.15	0.06	0.06	0.9
	November	16.8	0.17	0.02	0.02	0.1
	December	336.4	4.30	0.98	0.98	3.9
	Total	**1480.8**	**15.55**	**1.66**	**1.64**	**12.4**
2002	January	307.1	3.56	0.65	0.65	3.8
	February	264.9	5.42	2.53	2.50	13.4
	March	323.2	6.47	2.50	2.31	11.8
	April	249.2	7.71	3.12	2.59	12.1
	May	295.4	10.48	3.05	2.91	10.4
	June	89.6	1.32	0.54	0.39	3.0
	July	282.8	9.21	5.21	2.24	21.6
	August	316.4	11.09	6.28	4.96	22.5
	September	367.0	16.49	10.23	9.84	29.4
	October	378.4	21.66	13.92	13.89	34.2
	November	354.0	20.60	15.44	15.36	35.1
	December	370.4	22.65	17.51	17.15	37.7
	Total	**3598.4**	**136.66**	**80.98**	**74.79**	**235.0**
2003	January	147.8	8.88	7.03	6.77	19.2
	February	155.7	7.91	6.50	5.98	19.9
	March	226.5	14.66	12.03	11.84	28.3
	April	348.2	23.36	19.81	18.74	45.9
	May	326.5	25.51	22.63	22.13	42.8
	Total	**1204.7**	**80.32**	**68.00**	**65.46**	**156.1**
Run II	**Total**	**6283.9**	**232.61**	**150.64**	**141.89**	**403.5**



D0 Integrated Luminosity



D0 vs CDF Integrated Luminosity



Improved Performance

How did we get from ~80% → ~90%?

- NOT easily - we are repeatedly readjusting to normal data taking mode
  - After one month shutdown from Jan 12 - Feb 10 (scheduled with delay)
  - And March 2-10 after two magnet replacments (unscheduled)
  - And May 27-June 1 due to power pole replacement (unscheduled)
  - And another dozen days of scheduled accelerator studies
  - Tevatron & Both Experiments benefit from a mode of continuous operation, luminosity delivery and data taking
- daqAI - better "trained" and more reliable
- Reduced Store and Run Transitions downtime
- Silicon L1 Front-End Busy reduction
  - Was ~5% at 1kHz, now closer to ~3.5%
  - Improved monitoring of the HDI performance by SMT shifters
    - Noisy HDIs contributing to the FEB are redownloaded or disabled
- Hard work by all experts
  - Prioritizing data taking with commissioning, maintenance and repairs
  - Keeping systems in the best working order possible
  - Improving training, documentation and checklists for shifters
    - The frequency of operator errors has dramatically decreased!

Data Taking Downtime & Deadtime

Major Causes of Lost Luminosity for Tuesday 03-Jun-2003 (0.7 hrs = 19.3% of luminosity)				
Cause	Start Time	Downtime (hrs)	Deadtime (hrs)	Comments
CFT/CTT Readout Problems	17:41, 18:09 & 18:16	0.23	0.15	First two physics runs of store 2642 were ended when Shifter/Experts reported the wrong calibration files were being used, and the data from the CFT crates was compromised. Quasi-parasitic activities from the CTT Expert did not entirely overlap with the CFT downloads, causing an additional 10 minutes of deadtime when the follow-up runs went 100% L1 FEB.
Master Clock Sequencer 2	18:55 & 19:23	0.17	0.08	Likely a leftover consequence of the MCH1 power trip on Monday eve. Sequencer 2 which runs just the Run I legacy L1 Cal Trig was in FreeRun mode instead of Synchronous Mode, i.e. locked to the Tevatron. The problem was noticed because total rate to tape was 50% low.

Major Causes of Lost Luminosity for Monday 02-Jun-2003 (1.9 hrs = 19.8% of luminosity)				
Cause	Start Time	Downtime (hrs)	Deadtime (hrs)	Comments
L1 Muon Concentrator Cards Failure	03:29 & 03:59	-	0.80	L3 rate to tape was about half of the expected value. Traced to L1 Muon triggers. Two long pauses while L1 Muon Expert diagnosed the problem. Two concentrator cards failed during shot setup. The inputs to the cards were disabled until store transition - running without scintillator tirggers from north octants 0, 1, 4 and 5.
v12 Trigger Test	15:55	0.16	-	Test v12 trigger list prototype. Downtime to change triggers and take 4 minute non-recorded run at the end of the store.
SMT HV Fatal Alarms	12:36	-	0.26	Over a 45 minute period, SMT HV 833P tripped six times. Deadtime due to auto-pauses of run and reramp of the HV channel. After last trip, the HV pod was turned off and associated HDIs were disabled.
End Store 2636	16:29	0.08	-	Ramp down Muon and SMT HV.

Major Causes of Lost Luminosity for Sunday 01-Jun-2003 (0.0 hrs)
No delivered luminosity.

Downtime
Difference between delivered & utilized luminosity

Deadtime
Losses to recorded luminosity from Pauses, COOR disables, etc.

We review these causes each week in Operations Mtg

- Can we prevent it from repeating?
- Is additional help needed to fix?
- Was data quality affected?
- Do we need better instructions?

http://www-d0.fnal.gov/runcoor/d0_private/operations/downtime/downtime.html

Data Taking Statistics

Our Best Week (so far) - 12-18 May 2003

			Normalizable Luminosity (nb^{-1})			Hours			Norm. Events (k)		Efficiency	
Day	Date	Del	Util	Rec	Physics	Store	Util	Rec	Rec	Physics	Rec	Phys
Mon	12-May-03	1520.82	1499.22	1368.66	1368.66	18.0	17.7	17.3	2635	2635	0.900	0.900
Tue	13-May-03	1450.60	1422.21	1349.71	1349.71	17.7	17.3	17.1	2320	2320	0.930	0.930
Wed	14-May-03	740.90	738.24	698.35	698.35	7.3	7.3	7.1	1065	1065	0.943	0.943
Thu	15-May-03	1205.42	1199.07	1121.08	1121.08	12.3	12.3	12.1	1670	1670	0.930	0.930
Fri	16-May-03	1538.16	1513.34	1371.04	1371.04	18.3	17.9	17.1	2397	2397	0.891	0.891
Sat	17-May-03	1483.74	1425.60	1339.76	1339.76	17.0	16.5	16.3	2260	2260	0.903	0.903
Sun	18-May-03	549.31	545.91	517.36	517.36	8.0	7.9	7.9	1138	1138	0.942	0.942
		8489.0	8343.6	7766.0	7766.0	98.6	96.9	94.9	13485	13485	0.915	0.915

Major Sources of Downtime & Deadtime (>0.15 hrs)

Date	Time	Downtime (hrs)	Deadtime (hrs)	Reason
12-May-03	9:00	0.00	0.25	Muon PDT 22
12-May-03	14:48	0.20	0.10	L2 Operator Error
13-May-03	15:55	0.75**	0.00	Network/Power Interruption - No Lumi for 0.75 hours
16-May-03	4:15	0.25	0.60	CFT/CTT Readout Problems
17-May-03	14:57	0.28	0.05	Muon x33 module 279

Other Losses

- ~0.5 hr: 40 Run transitions
- ~0.5 hr: 12 Begin or End Store transitions
- ~3 hrs: Average 3% FEB during physics data taking

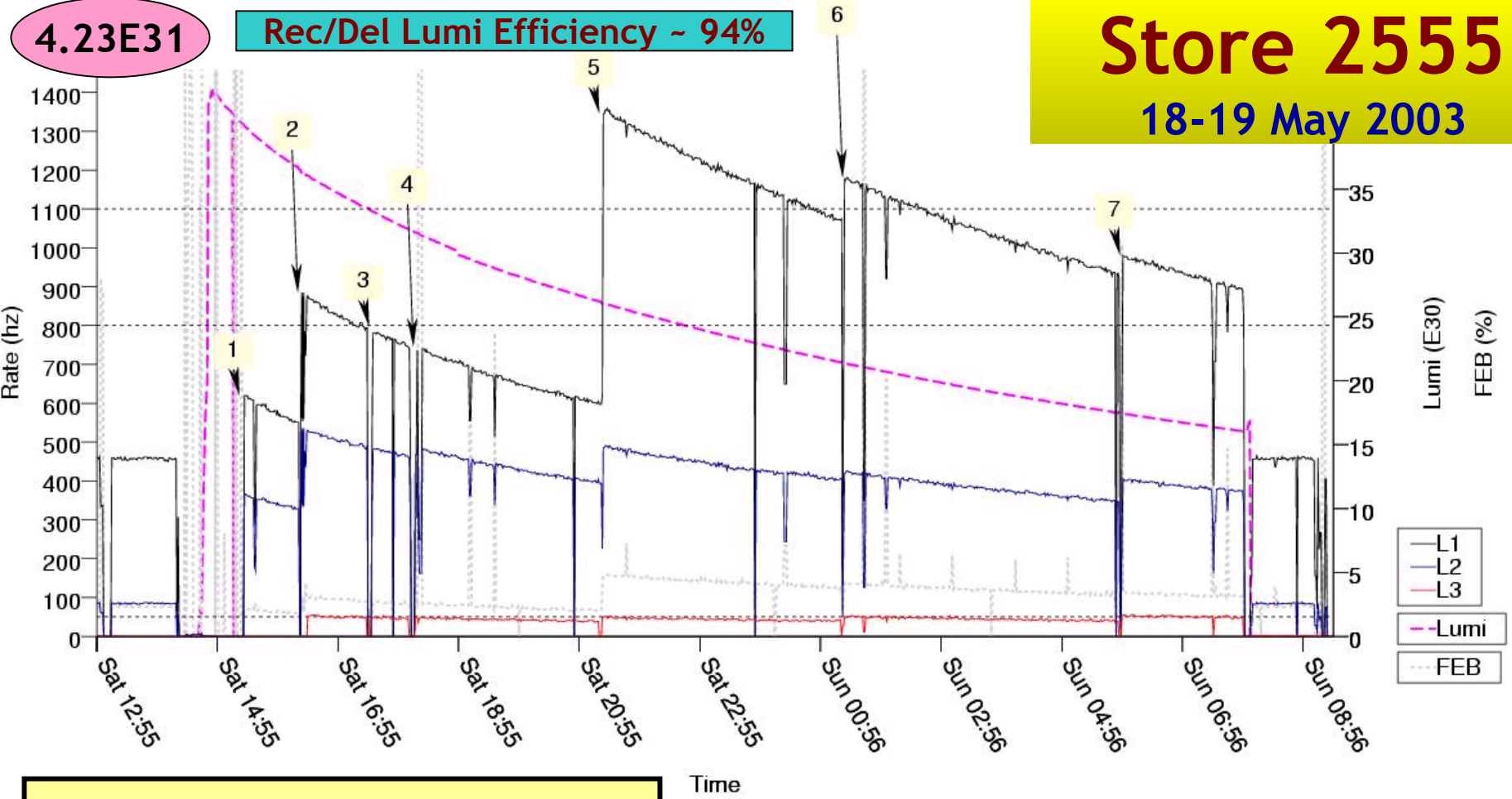
This is the type of information I show at the AEM or Ops Mtg

4.23E31

Rec/Del Lumi Efficiency ~ 94%

Store 2555

18-19 May 2003



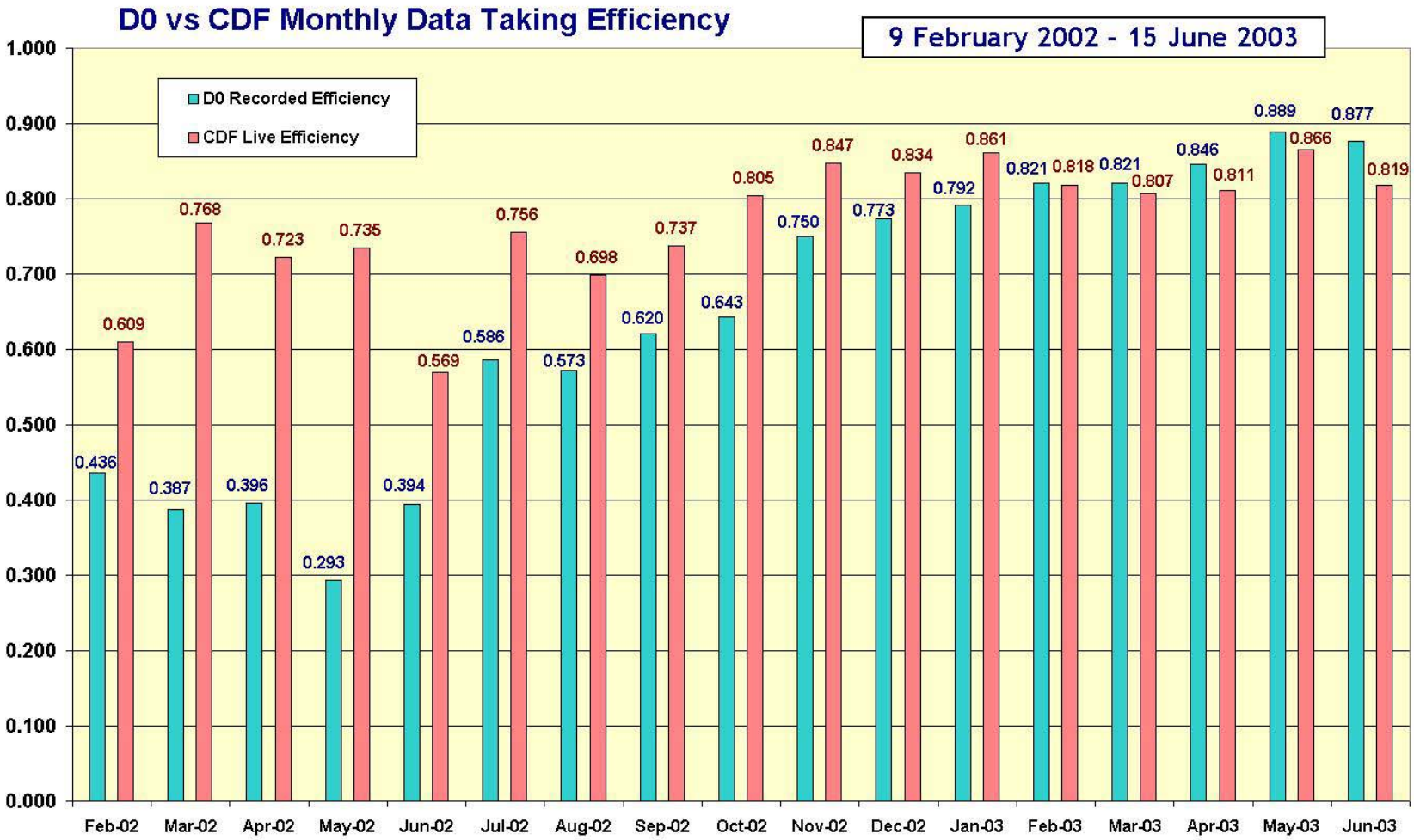
TMs now tune triggers to provide peak output L1/L2/L3 rates of < 1400/800*/50 Hz

*800 not realizable w/current trigger list

	Run	Duration	inL	Live	scl/hr	pause	<Tape Rate>	Prescale_File
1	177005	0.96 h	40.8	91%	2.1	0.03 h	39.0 hz	45E30
2	177006	1.11 h	37.0	96%	0.9	0.02 h	45.4 hz	35E30
3	177007	0.65 h	33.6	97%	0.0	0.00 h	41.1 hz	35E30
4	177008	3.06 h	31.9	97%	1.3	0.01 h	38.0 hz	30E30
5	177009	4.02 h	26.3	95%	0.7	0.02 h	38.0 hz	25E30
6	177010	4.58 h	21.5	95%	0.4	0.02 h	39.6 hz	20E30
7	177011	2.04 h	17.5	94%	2.5	0.01 h	43.6 hz	15E30

Work of Terry Toole
Plots linked from Operations Page

D0 vs CDF Efficiency

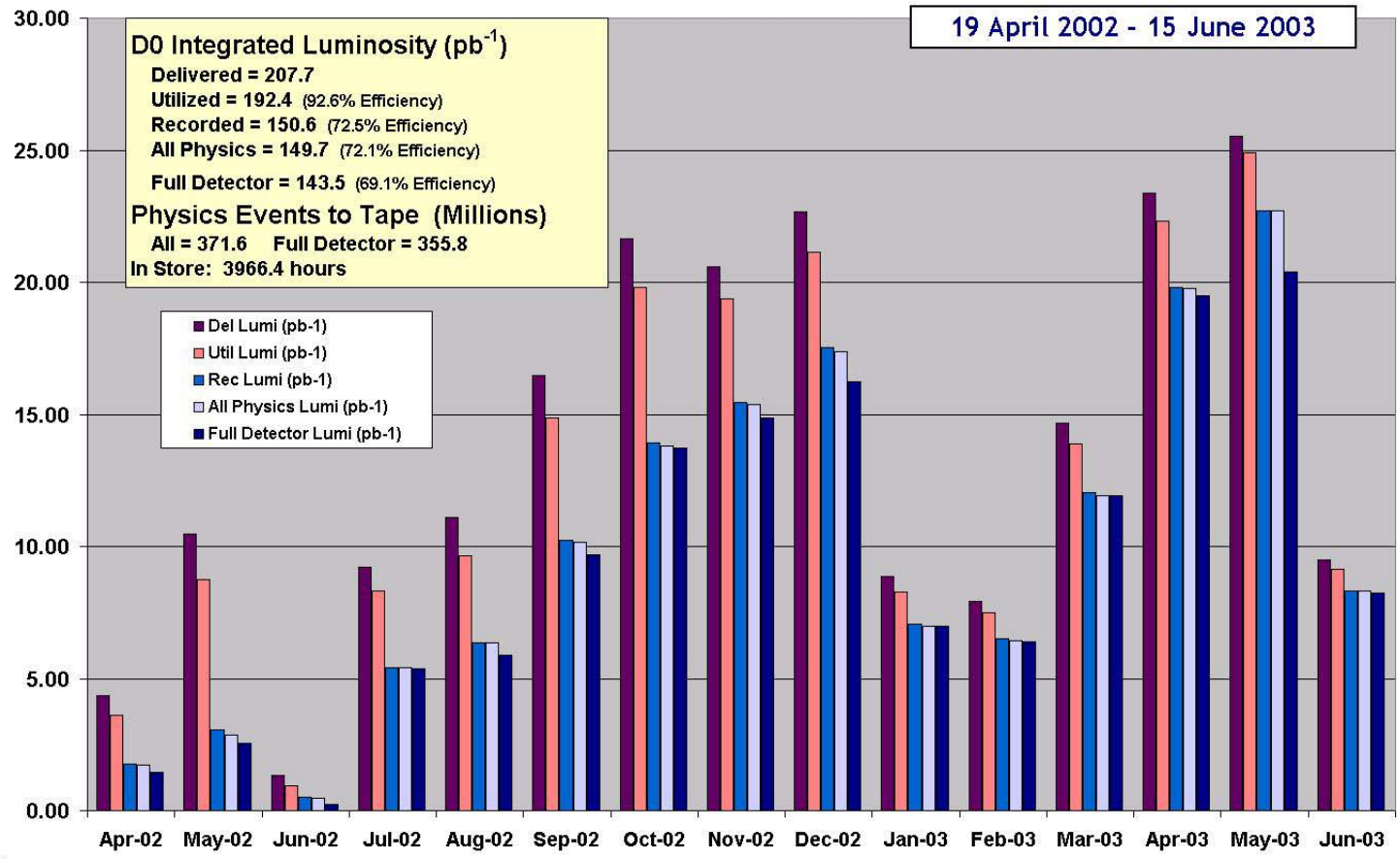


CDF uses data collected since 9 Feb 2002 in their conference results

But data taking efficiency is not the only measure of performance…

Physics Data Taking

Less than 35 pb^{-1} of luminosity was delivered prior to 19 Apr 2002



How do we stack up against CDF?

We have more lumi on tape with Silicon

9 February 2002 - 15 June 2003

But CDF has a better handle on their data quality - online & offline. What fraction of our physics data can be used for summer conferences?

CDF Integrated Luminosity (pb-1)
Delivered = 232.4
Live = 185.5 (79.8% Efficiency)
Good = 150.4 (64.7% Efficiency)
Good w/Silicon = 120.8 (52.0% Efficiency)
In Store: 4651.6 hours

More Online Support

- **Foremost we need more full-time effort working on the detector, trigger, DAQ and online systems** ***(offline needs will be discussed later)***
  - **Shifts do NOT meet these requirements**

Feb 2002

Without adequate support, Experts spend most of their time:

- **Reacting to problems and failures & Maintaining the status quo**
- **Not always proactively improving systems**

System	Needed # of FTEs	Estimated Current FTEs	Institutions
Run Coordination	4	3	Louisiana Tech, Maryland, Fermilab
SMT	6	2	CPPM, Bonn, Delhi, Moscow, Sweden, Lancaster, Manchester, Northwestern, Kansas State, Fermilab, Rochester
CFT & PS & Trig	6	4	Notre Dame, Kansas, Michigan, SUSB, BNL, Rice, Fermilab
Calorimeter & Trig	6	2	Grenoble, CPPM, Orsay, Paris, Lyon, Louisiana Tech, Michigan State, Princeton, Columbia, SUSB, BNL, UTA, Mainz
Muon & Trig	6	4	Tata, JINR, ITEP, Petersburg, Arizona, NIU, Boston, Northeastern, Indiana, Fermilab
FPD & Trig	3	2	LAFEX/CBPF, UERJ, SaoPaulo, UTA
Luminosity	3	2	Korea, Northwestern, Iowa, Brown, Rochester
L2	4	3	Munich, UIC, NIU, Maryland, Michigan State, Columbia, Florida, Boston, SUSB, Oklahoma, Aachen
DAQ	3	2	BNL, Washington, Brown, Fermilab
Online/Controls	2	2	Fermilab
Filtering	4	2	LAFEX/CBPF, Aachen, Imperial, Manchester, Vietnam, LBL, Louisiana Tech, Nebraska, Munich
Data Quality Monitoring	2	2	Manchester, Fermilab

- **W/additional manpower**
  - **Morale improves**
  - **Experts can spend more time on monitoring and automation**
  - **Shifters get more interaction with Experts, which promotes better training & performance**
  - **More eyes and more points of view**
  - **And better data**

Improving Online Data Quality

- Simplify detector examines
  - Many of the current histograms are too busy or too detailed for the average shifter
- Automate
  - SMT is doing an excellent job of automatically monitoring HDIs for high and low occcupancies
  - Luminosity runs with no Shifter
- Significant Event System
  - A lot of work has been done recently by the Muon group to raise fatal alarms when data integrity is affected
  - Can we set alarms on trigger rates, physics objects, etc?
- More physics examines
  - Are we monitoring all the objects that we care about?
- Prevent normalization of problems
  - Often a persistent issue is ignored, or repeatedly "discovered", disguising a similar problem
- Propagation of known problems from online to offline & vice versa
  - Use database? More dynamic?
  - Crossover meetings between software & hardware groups
  - D0 "heartbeat" web page
    - Runs, Physics Plots, Reco, SAM…
- Better attitude
  - Shifters need to feel more responsible for data taking
  - They should understand all the high level monitoring
    - Eliminate the low level expert stuff
  - Do not be intimidated
  - More eyeballs, more perspectives

Shifter Tutorials

- Frequent presentations given by the experts who run or design the systems.
- Program began to supplement the training of the DAQ Shifters
  - We no longer have DAQ Experts (everyone has moved on)
  - But everyone is welcome!
- 20 tutorials have been given since Jan 2003
  - Some are repeated as there is 100% DAQ Shifter turnover every 4-6 months
  - We want greater attendance
    - I am surprised more grad students & post-docs do not attend
      - Strongly encourage them!
    - Should we continue the series?
    - Are there topics you want to see?
- All material is posted to the web page, including related presentations at other venues and from previous years
- Arnd Meyer (meyera@fnal.gov) has taken over coordinating the tutorials

Dan Edmunds: D0 Trigger Framework (x2)
Dehong Zhang: DAQ Backend
Michael Begel: D0 Online Luminosity System
Mike Clements: L3/DAQ
Taka Yasuda: DAQ Monitor
Rich Smith: D0 Solenoid & Hall Probes
Scott Snyder: COOR
Nirmalya Parua: D0 Calorimeter System
Reinhard Schwienhorst: D0 L2 System
Markus Wobisch: D0 Muon System
Greg Davis: D0 VLPC Detectors
Eric Kajfasz: D0 Silicon Microstrip Tracker
Ron Lipton: D0 Silicon Radiation Protection
Pushpa Bhat: Global Monitoring
Nobu Oshima: D0 Event Display
Doug Chapin: L3/DAQ Overview & Monitoring
Stu Fuess: D0 Online system Part I
Fritz Bartlett: D0 High Voltage System
Geoff Savage: Significant Event System

http://www-d0.fnal.gov/runcoor/DAQ/

Online Logbook

Love or Hate It - the D0 Control Room Logbook is here to stay

- Stu & I have given frequent feedback to the CRL developers over the past year
  - I went to several meetings to show them how we use the CRL
- The CRL is more user friendly, faster, more robust with more features than a year ago
  - Thumbnail images
  - Rarely hangs or crashes
  - Send email from logbook
  - Annotations from the web
  - Remote GM and SAM Shifters can make text entries
  - Forms and checklists

Two major remaining issues

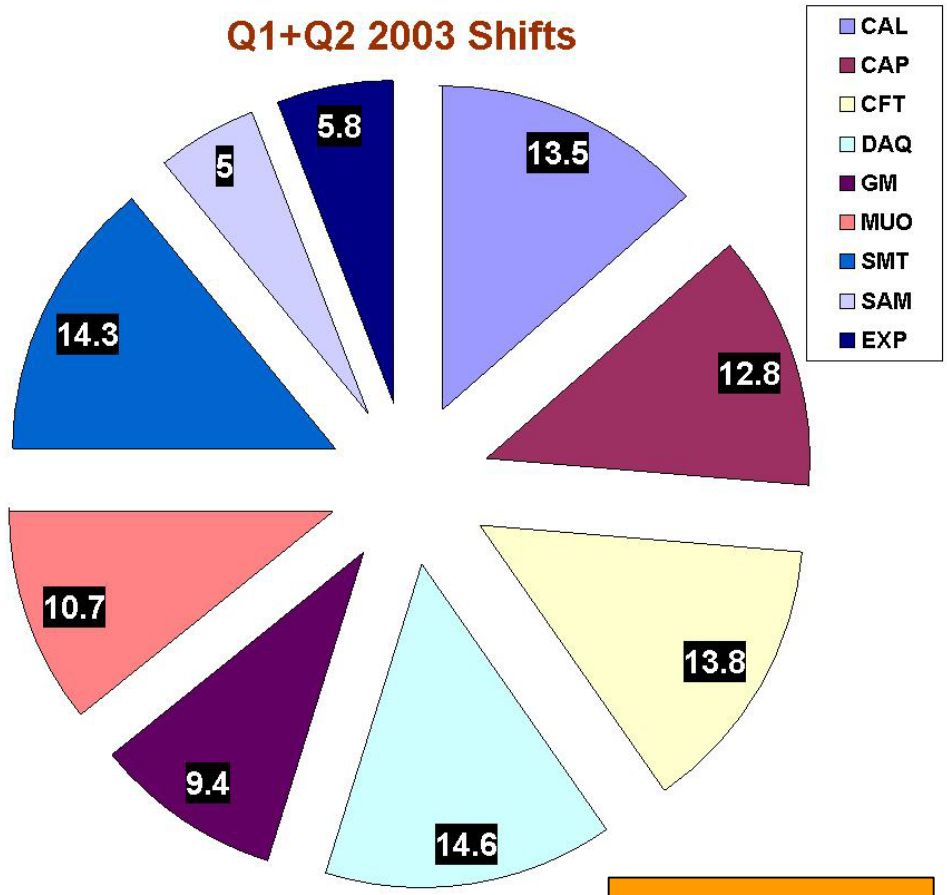
- Remote logbook is very slow
  - Need to insert images, tables and forms
  - CRL developers hope to have a fully functional remote version available by this fall
- Search is very slow
  - Stu is working on implementing some changes in conjunction with a new technical CRL release
  - Expect dramatically faster search method in ~weeks
- Other comments
  - There is no structure or guidance to shifters in how to make a logbook entry
    - Some people are real chatty
    - Others will go through a shift without typing anything
  - Should we provide some standardization?
  - Are all those images and checklists necessary?

Control Room Shifts - The Schedule

- Staff shifts for CAP, DAQ, CAL/MUO, SMT, CFT/PS, GM & SAM
  - Merging of Calorimeter & Muon Shifts began in early June
  - Merging of SMT & CFT/PS depends on the timescale of full commissioning of both the STT, CTT & FPD - unlikely for several months
  - Schedule all shifts 24 hours a day, 7 days a week
    - Tevatron schedule is conditional & less than a week in advance
      - D0 Shift Schedules need to be planned > 1 month in advance so non-resident collaborators can make travel arrangements
    - Because beam delivery is unpredictable we have "on-call" rules
      - Detector & GM Shifters may go on-call during extended periods (>4 hours) with no beam and no shifter tasks to perform
  - Followed a modified shift schedule during shutdowns
    - DAQ was 24/7; Captains 2 x 6 hours/day; SMT & CFT slotted only day and eve shifts; CAL & MUO had on-call expert; GM cancelled
    - SAM always on as access to data/MC is not dependent on live data taking
- Expert Shifts are also scheduled
  - CAL, CFT, CTT, FPD, GM, L1MUO, L2, L3, LUM, SMT
    - 90-99% of the time, systems are stable & can be run in non-expert mode
- GM & SAM Shifters fill an important role on this experiment
  - Remote Collaborators take about ~1/3 of GM & ~90% of SAM Shifts

Control Room Shifts - The Count

- DØ Shift Calendar
  - 1 April 2001 - 30 June 2003
  - Sorted by Shift Type, IND & INST
- No Double Counting (Dual Shifts)
  - CAP/DAQ + Detector = 1 Shift
- Most Recent Author & Masthead Lists
  - Q2 2001: 23 MAR 2001
  - Q3 2001: 3 JUL 2001
  - Q4 2001: 7 SEP 2001
  - Q1 2002: 28 JAN 2002
  - Q2 2002: 1 MAR 2002
  - Q3 2002: 13 JUN 2002
  - Q4 2002: 29 AUG 2002
  - Q1 2003: 5 DEC 2002
  - Q2 2003: 19 MAR 2003
- Institutional Averages based on the Number on Inst. Masthead
  - Assumed no exemptions
  - Assumed constant masthead/quarter



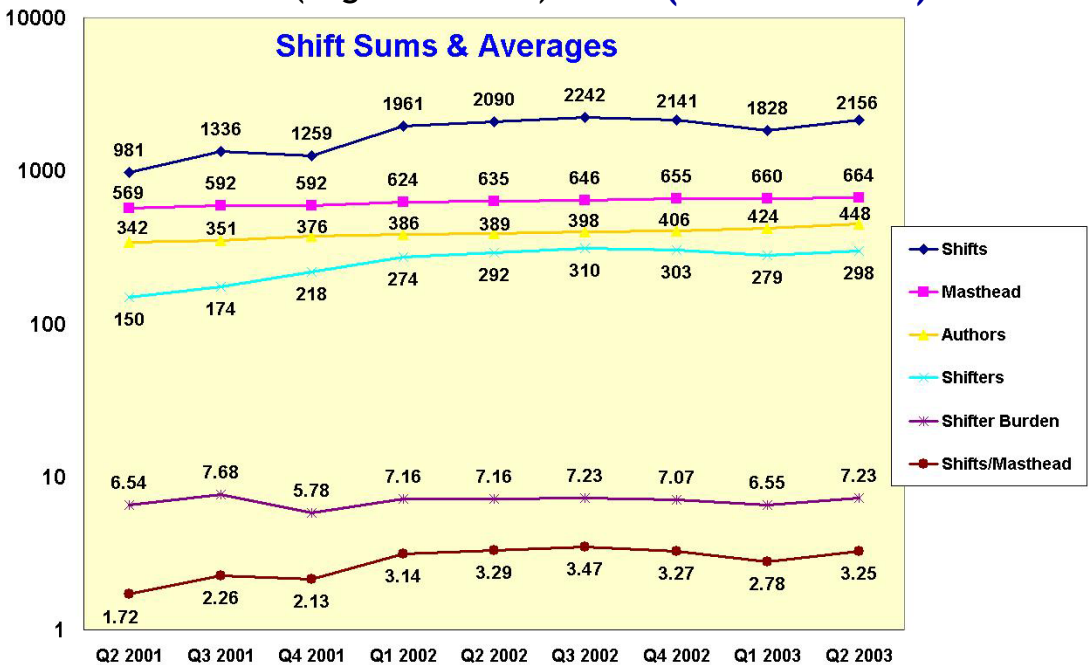
Reasonably well documented. Links to the full spreadsheets and html conversions.

http://www-d0.fnal.gov/runcoor/d0_private/d0shifts.html

Control Room Shifts - The Statistics

Nine Quarters April 1, 2001 - June 30, 2003

- # Total Number of Shifts = 15994
- # People Who Took At Least 1 Shift = 531
- 9+ Shifts (Avg 1 Shift/Qtr) = 438
- 18+ Shifts (Avg 2 Shifts/Qtr) = 342
- 27+ Shifts (Avg 1 Shift/mo) = 264 (78.5% Total)
- 54+ Shifts (Avg 2 Shifts/mo) = 76 (33.1% Total)



- Joe Steele *Virginia* 112
- Horst Wahl *FSU* 112
- Andrew Askew *Rice* 98
- Eric Kajfasz *Marseille* 98
- Victor Bodyagin *Moscow* 96
- Andy Haas *Washington* 94
- Mike Tuts *Columbia* 90*
- Jeff Temple *Arizona* 89
- Alan Stone *LATech* 88
- Ryan Hooper *Notre Dame* 85
- Gordon Watts *Washington* 85
- Alan Bross *Fermilab* 82
- Harald Fox *Northwestern* 82
- Ursula Bassler *Paris* 81
- Kevin Black *Boston U* 81
- Greg Davis *Rochester* 81
- Marco Verzocchi *Maryland* 81
- Rob McCroskey *Arizona* 81

Sum = 1616 Shifts = 10.1% Total!

We will need institutions to provide shifters at the rate of 7 shifts/6 months/person on masthead for Jul-Dec 2003.

* It's a conspiracy, Mike!

DAQ Shifts

http://www-d0.fnal.gov/runcoor/d0_private/DAQ/daq_manpower.html

- Web page describes schedule, requirements, training, shifter needs, etc.
  - 45 Shifts in 16 weeks (one week on, two weeks off)
    - DAQ Shifters need to be local for 3-4 months
  - Excellent introduction to the D0 Experiment
    - We assume no knowledge of D0 or data taking & provide full training
    - Detectors, Luminosity, Triggering, Data Acquisition, Physics Objects
  - By August 2003, over 60 people will have completed a DAQ tour of duty, so the pool of available DAQ Shifters continues to diminish
    - New OR current grad student or post-doc at D0 who have not yet taken DAQ Shifts, please contact Arnd Meyer (meyera@fnal.gov) - This Week!!

Remember we need to man the DAQ Shift 24/7 even during holidays.

```
22 Sep 2003 - Shifter N - Start days (08:00-16:00) - End Jan 11 owl
29 Sep 2003 - Shifter L - Start days (00:00-08:00) - End Jan 18 eve
6  Oct 2003 - Shifter M - Start eves (16:00-08:00) - End Jan 25 day
6  Oct 2003 - Shifter O - Start days (08:00-16:00) - End Jan 25 owl
1  Dec 2003 - Shifter P - Start days (08:00-16:00) - End Mar 21 owl
22 Dec 2003 - Shifter R - Start days (00:00-08:00) - End Apr 11 eve
29 Dec 2003 - Shifter S - Start days (08:00-16:00) - End Apr 18 owl
```

The following people are committed to take DAQ Shifts but a start date has not been set:
Diptansu Das (KSU), Norm Buchanan (FSU), Ariel Schwartzmann (Princeton), Christian Autermann (Aachen), Hao Yin (Indiana), Lydia Lobo (Imperial), Tim Scanlon (Imperial), Marilyn Audsley (Lancaster), Amber Jenkins (Imperial), Sinjini Sengupta (FSU), Paul Telford (Manchester), Oleksiy Atramentov (Iowa)
We need more in case of visa issues, holiday overlaps, next Spring, etc.

Summary

- We have reached our goal of >90% data taking efficiency a month ahead of schedule!
  - Our day to day operations have been more stable than our competition across the ring since Feb 2003
    - We recorded 66 out of 78 pb^{-1} with Silicon!
    - They recorded 67 out of 81 pb^{-1}, but only 53 pb^{-1} with Silicon!
  - Now we want to achieve >90% data quality
    - Efficiency and Quality are not uncorrelated…
    - And how do we measure quality?
- Summer 2003 Shutdown
  - Begin on August 25 and last for SEVEN weeks
    - Driven by Accelerator maintenance, recycler commissioning, electron cooling construction and NuMi construction
  - Mid-October before data taking resumes
    - See Modified Shift Schedule for Shutdowns on earlier slide

Changing of the Guard

- For 3 years, I have done a lot to support D0 Operations: ICD, Calorimeter, DAQ Shifter, DAQ Expert, Shift Captain and Deputy Run Coordinator - often doing more than one at the same time
  - Despite my many complaints, I mostly enjoyed my work - and still do, but…it is time I work on other aspects of being a physicist
  - It has been a pleasure to work with so many of you
    - Special thanks to Dean, Leslie, Eric, Harald, Michael, Elizabeth, Terry, Bill, Drew, Lyn, Stu, Gustaaf, Reinhard, Gene, Harry, John, Jerry, Horst, Mike, Geoff, Dan, Gordon, Michiel, Pete, Russ, Rolando, all my DAQ Shifters, on and on…
      - So many fine people with which to work, but not the time to mention them all
    - In particular, my greatest thanks to Dmitri for guiding me to be a better leader, diplomat and physicist
- Arnd Meyer (Aachen) will assume the role of Deputy Run Coordinator July 1st
  - Arnd & I have discretely overlapped on many tasks for > 1 month
  - I will still be around for consultation, but it is best if I make a clean break from the D0 Control Room
    - Except for July 6-13 when I will serve as Acting Run Coordinator while Dmitri does some globe-trotting

Good Luck - Dmitri, Arnd, the TMs & DAQ Shifters.

Thank you.